

CLAIMS

1. A monoclonal antibody which binds to a shared epitope of Human Immunodeficiency Virus-1 protein p24 and Human Immunodeficiency Virus-2 protein p26.
2. The monoclonal antibody of claim 1 wherein said antibody is selected from the group consisting of 120A-270, 115B-151, 117-289, 103-350, 115B-303, and 108-394.
3. A hybridoma cell line which secretes a monoclonal antibody which binds to a shared epitope Human Immunodeficiency Virus-1 protein p24 and Human Immunodeficiency Virus-2 protein p26.
4. The hybridoma cell line of claim 3, wherein said cell line is selected from the group consisting of A.T.C.C. Deposit No. HB _____, and A.T.C.C. Deposit No. HB _____.
5. A method for detecting the presence of one or more antigens selected from the group consisting of HIV-1 antigen and HIV-2 antigen, in a test sample suspected of containing one or more of said antigens, comprising the steps of:
 - a) contacting said test sample with at least

- one monoclonal antibody which binds to a shared epitope of Human Immunodeficiency Virus-1 protein p24 and Human Immunodeficiency Virus-2 protein p26 for a time and under conditions
5 sufficient for the formation of antibody/antigen complexes; and
b) detecting said complexes, presence of said complexes indicating presence of at least one antigen selected from the group consisting of HIV-1 antigen and HIV-2 antigen, in said test
10 sample.
6. The method of claim 5 wherein said at least one monoclonal antibody of step (a) is selected from the group consisting of 120A-270, 115B-151, 117-289, 103-350, 115B-303 and 108-394.
15
7. The method of claim 6 wherein said at least one monoclonal antibody of step (a) is labeled.
20
8. A method for detecting the presence of one or more antigens selected from the group consisting of HIV-1 antigen and HIV-2 antigen, in a test sample suspected of containing one or more of said antigens, comprising the steps of:
25 a) contacting said test sample with at least one monoclonal antibody which binds to a shared epitope of Human Immunodeficiency Virus-1 protein 24 and Human Immunodeficiency Virus-2 protein p26 for a time and under conditions sufficient for the formation of antibody/antigen complexes;
30 b) adding a conjugate to the resulting antibody/antigen complexes for a time and under

conditions sufficient to allow said conjugate to bind to the bound antigen, wherein said conjugate comprises an antibody attached to a signal generating compound capable of

generating a detectable signal; and

c) detecting presence of antigen which may be present in said test sample by detecting a signal generated by said signal generating compound, presence of said signal indicating presence of at least one antigen selected from the group consisting of HIV-1 antigen and HIV-antigen in said test sample.

19

10

15 9.

The method of claim 8 wherein said at least one monoclonal antibody of step (a) is selected from the group consisting of 120A-270, 115B-151 117-289, 103-350, 115B-303, and 108-394.

20 10.

The method of claim 8 wherein said antibody of step (b) of said conjugate is selected from the group consisting of 120A-270, 115B-151, 117-289, 103-350, 115B-303, and 108-394.

25 11.

The method of claim 8 wherein said at least one monoclonal antibody of step (a) is selected from the group consisting of 120-270, 108-394 and 115B-303, and said antibody of step (b) of said conjugate is selected from the group consisting of 117-289 and 115B-151.

30

12. The method of claim 11 wherein said at least one monoclonal antibody of step (a) is 120A-270

and said antibody of step (b) of said conjugate
is 115B-151.

- 5 13. A method for detecting the presence of one or
more antigens selected from the group
consisting of HIV-1 antigen and HIV antigen, in
a test sample suspected of containing one or
more of said antigens, comprising the steps of:
- 10 (a) contacting: 1) at least one monoclonal
antibody which binds to a shared epitope of
HIV-1 p24 antigen and HIV-2 p26 antigen bound
to a solid support, 2) said test sample, and
3) an indicator reagent comprising an
antibody which binds to HIV-1 antigen and
HIV-2 antigen to which a signal generating
compound is attached, to form a mixture;
- 15 (b) incubating said mixture for a time and under
conditions sufficient to form
antibody/antigen/antibody complexes;
- 20 (c) detecting presence of a measurable signal
generating by said signal-generating
compound, presence of said signal indicating
presence of one or more antigens in said test
sample selected from the group consisting of
25 HIV-1 antigen and HIV-2 antigen.

14. The method of claim 13 wherein said at least one
monoclonal antibody of step (a) is selected from
30 the group consisting of 120A-270, 115B-151, 117-
289, 103-350, 115B-303 and 108-394.

15. The method of claim 13 wherein said antibody of
said indicator reagent of step (a) is selected

from the group consisting of 120A-270, 115B-151, 117-289, 103-350, 115B-303 and 108-394.

16. The method of claim 13 wherein said at least one
5 monoclonal antibody of step (a) is 120A-270 and
said antibody of said indicator reagent of step
(a) is 115B-151.

17. A kit for determining the presence of one or more
10 antigens selected from the group consisting of
HIV-1 antigen and HIV-2 antigen in a test sample
comprising: (a) at least one monoclonal antibody
which binds to a shared epitope of Human
Immunodeficiency Virus-1 protein p24 and Human
15 Immunodeficiency Virus-2 protein p26; and (b) a
conjugate comprising an antibody attached to a
signal generating compound capable of generating a
detectable signal.

20 18. The kit of claim 17 wherein said at least one
monoclonal antibody of (a) is selected from the
group consisting of 120A-270, 115B-151, 117-289,
103-350, 115B-303 and 108-394.

25 19. The kit of claim 17 wherein said antibody of (b)
is selected from the group consisting of 120A-270,
115B-151, 117-289, 103-350, 115B-3-3 and 108-394.

20. A diagnostic reagent comprising at least one
30 monoclonal antibody selected from the group
consisting of 120A-270, 115B-151, 117-289, 103-
350, 108-394 and 115B-303.

21. An isolated peptide comprising the amino acid sequence of SEQ ID NO:1.
22. An isolated peptide comprising the amino acid sequence of SEQ ID NO:2.
- 5 23. An isolated peptide comprising the amino acid sequence of SEQ ID NO:3.
- 10 24. An isolated peptide comprising the amino acid sequence of SEQ ID NO:4.
25. An isolated peptide comprising the amino acid sequence of SEQ ID NO:5.
- 15 26. An isolated peptide comprising the amino acid sequence of SEQ ID NO:6.
27. A method of detecting 1) one or more antibodies selected from the group consisting of HIV-1 antibody and HIV-2 antibody, and 2) one or more antigens selected from the group consisting of HIV-1 antigen and HIV-2 antigen, in a test sample suspected of containing said one or more of said antibodies and one or more of said antigens,
20 comprising the steps of:
a) contacting said test sample with at least one HIV-1 antigen which binds to HIV-1 antibody for a time and under conditions sufficient for the formation of HIV-1 antigen/HIV-1 antibody complexes;
30 b) detecting said HIV-1 antigen/HIV-1 antibody complexes, presence of said complexes

indicating presence of HIV-1 antibody in said test sample;

5 c) contacting said test sample with at least one HIV-2 antigen which binds to HIV-2 antibody for a time and under conditions sufficient for the formation of HIV-2 antigen/HIV-2 antibody complexes;

10 d) detecting said HIV-2 antigen/HIV-2 antibody complexes, presence of said complexes indicating presence of HIV-2 antibody in said test sample;

15 e) contacting said test sample with at least one monoclonal antibody which binds to a shared epitope of Human Immunodeficiency Virus-1 protein p24 and Human Immunodeficiency Virus-2 protein p26 for a time and under conditions sufficient for the formation of antibody/antigen complexes; and

20 f) detecting said complexes, presence of said complexes indicating presence of at least one antigen selected from the group consisting of HIV-1 antigen and HIV-2 antigen, in said test sample.

25 28. A method of detecting 1) one or more antibodies selected from the group consisting of HIV-1 antibody and HIV-2 antibody, and 2) one or more antigens selected from the group consisting of HIV-1 antigen and HIV-2 antigen, in a test sample suspected of containing said one or more of said antibodies and one or more of said antigens, comprising the steps of:

30

- 5 a) contacting said test sample with at least one HIV-1 antigen which binds to HIV-1 antibody for a time and under conditions sufficient for the formation of HIV-1 antigen/HIV-1 antibody complexes;
- 10 b) adding a conjugate to the resulting HIV-1 antigen/HIV-1 antibody complexes for a time and under conditions sufficient to allow said conjugate to bind to the bound antibody, wherein said conjugate comprises an antigen attached to a signal generating compound capable of generating a detectable signal;
- 15 c) detecting HIV-1 antibody which may be present in said test sample by detecting a signal generated by said signal generating compound, presence of said signal indicating presence of HIV-1 antibody in said test sample;
- 20 d) contacting said test sample with at least one HIV-2 antigen which binds to HIV-2 antibody for a time and under conditions sufficient for the formation of HIV-2 antigen/HIV-2 antibody complexes;
- 25 e) adding a conjugate to the resulting HIV-2 antigen/HIV-2 antibody complexes for a time and under conditions sufficient to allow said conjugate to bind to the bound antibody, wherein said conjugate comprises an antigen attached to a signal generating compound capable of generating a detectable signal;
- 30 f) detecting HIV-2 antibody which may be present in said test sample by detecting a signal generated by said signal-generating compound, presence of said signal indicating presence of HIV-2 antibody in said test sample;

g) contacting said test sample with at least one monoclonal antibody which binds to a shared epitope of Human Immunodeficiency Virus-1 protein 24 and Human Immunodeficiency Virus-2 protein p26 for a time and under conditions sufficient for the formation of antibody/antigen complexes;

5 h) adding a conjugate to the resulting antibody/antigen complexes for a time and under conditions sufficient to allow said conjugate to bind to the bound antigen, wherein said conjugate comprises an antibody attached to a signal generating compound capable of generating a detectable signal; and

10 i) detecting presence of antigen which may be present in said test sample by detecting a signal generated by said signal generating compound, presence of said signal indicating presence of at least one antigen selected from the group consisting of HIV-1 antigen and HIV-2 antigen in said test sample.

15

20